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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/402,021	09/27/1999	MINORU TSUJI	KOIK-P9143	5446

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EXAMINER

SELLERS, DANIEL R

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/402,021	<b>Applicant(s)</b> TSUJI ET AL.	
	<b>Examiner</b> Daniel R. Sellers	<b>Art Unit</b> 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 9-15, 18, 19 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 9-15, 18, 19 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-3, 5-7, 9-15, 18, 19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shishido and Ware et al., U.S. Patent No. 5,537,573 (hereinafter Ware).
3. Regarding claim 1, see the previous office action rejection of claim 1 under 102(e). Shishido teaches all the features of claim 1 except the limitation “deleting said block....” Ware teaches a cache system for reducing latency and improving cache hit rate, or the likelihood that needed data is stored in a faster cache memory. Ware teaches the feature of receiving information indicating the period of time a data block is retained and the feature of deleting accordingly (Col. 6, line 62 – Col. 7, line 8). It would have been obvious for one of ordinary skill in the art to combine the teachings of Shishido and Ware for the purpose of providing a high cache hit rate and low latency (Ware, Col. 2, lines 52-54). A high cache hit rate, in this context, would reduce the need for retrieving the reused data block over and over again from a slower solid-state memory or an even slower spinning drive.
4. Regarding claim 2, the further limitation of claim 1, see the previous office action and the preceding argument with respect to claim 1. The combination of Shishido and Ware teach these features.

5. Regarding claim 3, the further limitation of claim 1, see the previous office action.

The combination of Shishido and Ware teach this feature.

6. Regarding claim 5, the further limitation of claim 1,

... wherein the period of time begins....

See Ware, column 6, line 66 – column 7, line 1. Ware teaches that a period of time starts when the data is read in, or accessed. It is taught previously, in Ware, that data is read in to the cache when it is accessed for the first time.

7. Regarding claim 6, the further limitation of claim 1, see the preceding argument with respect to claim 1. Ware teaches that a predetermined period of time or a predetermined number of accesses determines when a block of data is removed from the cache

8. Regarding claim 7, the further limitation of claim 1, see the preceding argument with respect to claim 5. Ware teaches the use of a predetermined period of time to determine the time of deletion, and it is inherent that a predetermined time can be referenced from the start of processing.

9. Regarding claim 9, the further limitation of claim 1, see the preceding argument with respect to claims 5 and 7. Shishido, further, teaches the use of timing events, which inherently can be used to indicate the start of the period of time for retention.

10. Regarding claim 10, the further limitation of claim 1, see the previous office action. Shishido teaches the use of added information to compress the file. Ware

teaches the use of timing information for retention and deletion purposes. It is obvious to combine the two as stated previously.

11. Regarding claim 11, the further limitation of claim 1, see the preceding argument with respect to claim 1. Ware teaches the use of timing information for retention and deletion purposes, wherein Ware is proposing a solution to cache misses and improving cache hits. Ware is also attempting to use the cache more efficiently (Col. 5, lines 20-24). It is inherent to delete the block of data after it is used for a final time for these reasons.

12. Regarding claim 12, the further limitation of claim 1, see the preceding argument with respect to claim 11. It is inherent that to improve cache hits, the block would be retained until it was unnecessary.

13. Regarding claim 13, the further limitation of claim 1, see the preceding argument with respect to claim 11. It is inherent to delete the information when it becomes unnecessary for the purpose of efficient memory usage.

14. Regarding claim 14, the further limitation of claim 1, see the preceding argument with respect to claim 1. In this context, it is inherent that a predetermined bit string, in either hardware or software, defines a predetermined time period.

15. Regarding claim 15, see the previous office action. Shishido teaches these features except for the information indicating a period of time for retention. It is inherent that the method Shishido discloses includes control means for memory management, and deleting, overwriting, or reallocation are basic functions of a memory management

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system. As stated previously, Ware teaches the use of timing information for the purpose of retention.

16. Regarding claim 18, the further limitation of claim 15, see the previous office action. The combination of Shishido and Ware teach this feature.

17. Regarding claim 19, the further limitation of claim 15, see the previous office action. The combination of Shishido and Ware teach this feature.

18. Regarding claim 25, see the preceding argument with respect to claim 15. The combination of Shishido and Ware teach these features.

### ***Response to Arguments***

19. Applicant's arguments filed December 07, 2005 have been fully considered but they are not persuasive. As acknowledged by the applicant, Shishido teaches a method for MIDI file compression. The file compression can be considered a method of dividing a MIDI file, a file comprised of musical notes, on a time basis, wherein the file comprises repeated blocks of musical notes. Shishido relies on a decoder to decode the compressed file and "a musical data storage medium (13) for storing the decoded musical data temporarily" (Col. 9, lines 47-48). The storage medium (13) inherently has a limited size for temporary storage, wherein blocks of data are inherently written and deleted. Shishido does not teach a time period indication for deleting the data from the temporary storage, however Ware teaches this missing feature. Ware teaches a cache that relies access times to determine what is removed from the cache, or the temporary storage medium (Col. 6, line 62 – Col. 7, line 8).

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20. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ware teaches a reason for the combination (Col. 2, lines 52-54).

21. Regarding claims 1-3, 5-7, 9-15, 18, 19, and 25, see the current rejections under 35 USC 103.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rosenau et al., U.S. Patent 5,598,352, Gannon, U.S. Patent 5,990,407, and Abrams et al., U.S. Patent 6,658,309. These references were included in the first office action on the merits.

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRS

  
SINH TRAN  
SUPERVISORY PATENT EXAMINER